Washington State Department of Health

How to Report Suspected Cases of West Nile Virus Disease and Submit Clinical Specimens for Laboratory Testing

Physicians and other health care providers should report suspected cases of West Nile viral disease to their local health jurisdiction or to the Washington State Department of Health.

What to report: Hospitalized adult or pediatric patients with any of the following clinical syndromes:

1) Viral encephalitis, a clinical diagnosis characterized by:
   a) Fever ≥38°C or 100°F **and**
   b) CNS signs may include altered mental status (altered level of consciousness, confusion, agitation, or lethargy), coma, or other cortical signs (cranial nerve palsies; paresis or paralysis, or seizures), **and**
   c) Abnormal CSF profile suggestive of viral etiology: a negative bacterial stain and culture, CSF pleocytosis and/or moderately elevated protein
2) Aseptic meningitis occurring May through November in any patient ≥18 years of age, characterized by:
   a) Fever ≥38°C or 100°F **and**
   b) Signs of meningeal inflammation (stiff neck, headache, photophobia) **and**
   c) Abnormal CSF profile suggestive of viral etiology: a negative bacterial stain and culture, CSF pleocytosis, and/or moderately elevated protein
3) Presumed Guillain-Barre syndrome or acute flaccid paralysis even in the absence of fever and other neurologic symptoms.
4) Suspected West Nile virus infection in patients with potential recent blood donation or transfusion histories, organ transplant recipients, laboratory or occupational exposures, transplacental or breast-feeding associated exposures.
5) Laboratory confirmed WNV infection in any patient.

How to report: **Contact your local health jurisdiction or call Communicable Disease Epidemiology, Washington State Department of Health (WSDOH) 24 hour reporting line @ 206.361.2914 or 877.539.4344. Suspected and confirmed cases of West Nile viral (WNV) disease are immediately reportable in Washington State.**

How to arrange testing: WSDOH Public Health Laboratories (PHL) will perform WNV IgM and IgG antibody assay by ELISA on serum or CSF from patients with severe clinical presentations consistent with WNV [see reporting categories 1-4 in *What to report*] after the case has been reported to the local health jurisdiction and WSDOH Communicable Disease Epidemiology. When you call to report a suspected case, the local health jurisdiction will obtain relevant information and assist in arranging laboratory testing.

Commercial laboratory testing is available to diagnose patients with suspected mild forms of WNV infection. All positive laboratory findings, including those from commercial laboratories, should be reported to the local health jurisdiction.

Which specimens to obtain, when, and where to send them: **Submit 1 cc of CSF or serum** (separated serum, not whole blood) for ELISA testing.

- The CSF or serum should be obtained ≥8 days after onset of symptoms.
- **The local health jurisdiction must be notified before any sample is submitted.**
- If requested, convalescent serum should be obtained 2-4 weeks after the acute specimen.
- Specimens should be refrigerated and transported cold. Frozen CSF is acceptable.
- Specimens should be submitted with a completed WSDOH PHL *Virus and Rickettsial Examinations* form to the WSDOH PHL 1610 NE 150th St, Shoreline, WA 98155.

Test Interpretation

IgM antibody develops by day 8, and IgG antibody usually by 3 weeks after onset. In general, convalescent specimens should be drawn about 2-3 weeks after acute specimens. Negative results on a specimen obtained <8 days after onset of illness may be inconclusive. A convalescent specimen, obtained at least 2 weeks after the first specimen, will be needed to make a final determination. Cross-reactions may occur in patients who have had yellow fever or Japanese encephalitis vaccination, or a previous history of arboviral encephalitis or dengue fever.